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21171

7590

04/03/2009

STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

TRAN, NGHI V

ART UNIT

PAPER NUMBER

2451

DATE MAILED: 04/03/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,566	11/20/2001	Makoto Okada	1359.1057	8743

TITLE OF INVENTION: OBJECT COLLABORATION APPARATUS USING MESSAGE TYPE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	07/06/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail

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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

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21171 7590 04/03/2009

**STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005**

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE-FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

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nonprovisional	NO	\$1510	\$300	\$0	\$1810	07/06/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
TRAN, NGHI V	2451	709-206000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

2. For printing on the patent front page, list

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY AND STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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EXAMINER

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DATE MAILED: 04/03/2009

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 421 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 421 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability**Application No.**

09/988,566

Applicant(s)

OKADA ET AL.

Examiner

NGHI V. TRAN

Art Unit

2451

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERIT IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/22/2008.
2. ☒ The allowed claim(s) is/are 1-7 and 9.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
2. Authorization for this examiner's amendment was given in a telephone interview with J. Randall Beckers (Reg. No. 30,358) on March 13, 2009.
3. The application has been amended as follows:

In the claims

1. (currently amended) An object collaboration apparatus operated in accordance with a message an action relationship, comprising:

a memory;

a message receiving part that allows each object to monitor and capture a message transmitted among objects on a network, said message including a message type and a message body, said message type indicating a syntax of the message body and said message body being described in a syntax indicated by the message type;

a message and action relationship storing part that stores a content of an action that is a reaction to the message and includes instructions defining a processing to be executed by the object, when a message is given, searches for the content of an action corresponding to the given message by using the message body of the give message as a search key; ~~and~~

an action executing part that executes processing in accordance with the content of an action obtained as a search result by the message and action relationship storing part [[:];

~~wherein the apparatus further comprises~~ a message type classifying and matching part, the message type classifying and matching part stores a message type dealt with by the message and action relationship storing part, conducts matching processing for determining whether or not a message type of the received message is matched with the message type dealt with by the message and action relationship storing part, and if matched, gives the received message to the message and action relationship storing part; and

an entity name rewrite object for, which respect to a message received from one object entity, rewriting object entity name information in a message representing the one object entity to another object entity name information representing anther object entity, and returning the message to the network.

2. (previously presented) An object collaboration apparatus according to claim 1, wherein classification of the message type has a hierarchy, and a message type header representing the message type contains information representing the hierarchy of the classification of the message type, and
by applying the hierarchy of the classification of the message type, the message type classifying and matching part stores and holds a message type dealt with by the message and action relationship storing part, analyzes a message type of the received message, and conducts matching of the message type.
3. (original) An object collaboration apparatus according to claim 2, wherein the message type is defined by using an idea of inheritance in object-oriented programming, and the hierarchy of the classification of the message type contains a hierarchy of classification of a class derivation message type and a class derivation origin message type.
4. (currently amended) An object collaboration apparatus operated in accordance with a message and action relationship, comprising:
a memory;

a message receiving part that allows each object to monitor and capture a message transmitted among objects on a network, said message including a message type and a message body, said message type indicating a syntax of the message body and said message body being described in a syntax indicated by the message type;

a message and action relationship storing part that stores a content of an action that is a reaction to the message and includes instructions defining a processing to be executed by the object, when a message is given, searches for the content of an action corresponding to the given message by using the message body of the given message as a search key; ~~and~~

an action executing part that executes processing in accordance with the content of an action obtained as a search result by the message and action relationship storing part[.];

a message type classifying and matching part, the message type classifying and matching part stores a message type dealt with by the message and action relationship storing part, conducts matching processing for determining whether or not a message type of the received message is matched with the message type dealt with by the message and action relationship storing part, and if matched, gives the received message to the message and action relationship storing part; and

~~wherein the apparatus further includes~~ an entity name rewrite object for, with respect to a message received from one object entity, rewriting object entity name information in a message representing the one object entity to another object entity name information representing another object entity, and returning the message to the network.

5. (previously presented) An object collaboration apparatus according to claim 4, wherein for synchronization processing between objects, action contents desired to be subjected to the synchronization processing are described by using the object entity name to be an entity name rewrite target by the entity name rewrite object, in the message and action relationship storing part of an object to be a slave, and

the entity name rewrite object rewrites the object entity name written as the entity name rewrite target into an object entity name to be a master object of the synchronization processing.

6. (currently amended) A computer-readable recording medium storing a processing program for realizing an object collaboration apparatus operated in accordance with a message and action relationship, the program comprising:

a message receiving processing operation of allowing each object to monitor and capture a message transmitted among objects on a network, said message including a message type and a message body, said message type indicating a syntax of the message body and said message body being described on a syntax indicated by the message type;

a message and action relationship storing processing operation of storing a content of an action in a memory that is a reaction to the message and includes instructions defining a processing to be executed by the object, when a message is given, searching for the content of an action corresponding to the given message by using the message body of the given message as a search key;

an action executing processing operation of executing processing in accordance with the content of an action obtained as a search result by the message and action relationship storing processing operation;

a processing operation of storing a message type dealt with in the message_and action relationship storing processing operation;

a processing operation of conducting matching processing for determining whether or not a type of the received message is matched with the message type dealt with by the message and action relationship storing processing operation;

a processing operation of giving the message to the message and action relationship storing part only in a case where the message type of the received message is matched in the matching processing; and

a processing operation of rewriting object entity name information in a message representing the one object entity to another object entity name information representing another object entity, and returning the message to the network.

7. (currently amended) A computer-readable recording medium storing a processing program for realizing an object collaboration apparatus for rewriting an entity name of a message transmitted by one object to an entity name of another object, operated in accordance with a message and action relationship, the program comprising:

a message receiving processing operation of allowing each object to monitor and capture a message transmitted among objects on a network, said message including a message type and a message body, said message type indicating a syntax of the message body and said message body being described in a syntax indicated by the message type;

a message and action relationship storing processing operation of storing a content of an action in a memory that is a reaction to the message includes instructions defining a processing to be executed by the object, and, when a message is given, searching for the content of an action corresponding to the given message by using the message body of the given message as a search key;

an action executing processing operation of executing processing in accordance with the content of an action obtained as a search result by the message and action relationship storing processing operation; ~~and~~

a message type classifying and matching part, the message type classifying and matching part stores a message type dealt with by the message and action relationship storing part, conducts matching processing for determining whether or not a message type of the received message is matched with the message type dealt with by the message and action relationship storing part, and if matched, gives the received message to the message and action relationship storing part; and

an entity name rewrite processing operation of, with respect to a message received from one object entity, rewriting object entity name information in a message representing the one object entity to another object entity name information representing another object entity, and returning the message to the network.

8. (cancelled)

9. (currently amended) An object collaboration apparatus operated in accordance with a message and action relationship, comprising:

a memory;

a message receiving part that allows an object to monitor and capture a message transmitted among objects on a network, said message including data required for an action or parameters and being composed of a message type and a message body wherein said message type indicates a syntax of the message body and includes a hierarchical structure of a class derivation original message type and said message body is described in a syntax indicated by the message type;

a message and action relationship storing part that stores a content of an action that is a reaction to the message and includes instructions defining a processing to be executed by the object, when a message is given, searching for the content of an action corresponding to the given message by using the message body of the given message as a search key;

an action executing part that executes processing in accordance with the contents of the action obtained as a search result by the message and action relationship storing part;

a message type classifying and matching part, the message type classifying and matching part stores a message type dealt with by the message and action relationship storing part, conducts matching processing for determining whether or not a message type of the received message is matched with the message type dealt with by the message and action relationship storing part, and if matched, gives the received message to the message and action relationship storing part; and

an entity name rewrite object for, with respect to a message received from one object entity, rewriting object entity name information in a message representing the one object entity to another object entity name information representing another object entity, and returning the message to the network.

10. (cancelled)

Allowable Subject Matter

4. Claims 1-7 and 9 are allowed.

5. The following is an examiner's statement of reasons for allowance:

The cited prior arts fail to disclose or suggest an object collaboration apparatus operated to monitor and capture a message transmitted among objects on a network including a message type and a message body which said message type indicating a syntax of the message body and said message body being described in a syntax indicated by the message type; operated to store a content of an action that is a reaction to the message and includes instructions defining a processing to be executed by the object, when a message is given, searches for the content of an action corresponding to the given message by using the message body of the give message as a search key in accordance with the content of an action obtained as a search result by the message and action relationship storing part; operated to conduct matching processing for determining whether or not a message type of the received message is

matched with the message type dealt with by the message and action relationship storing part, and if matched, gives the received message to the message and action relationship storing part; operated to rewrite object entity name information in a message representing the one object entity to another object entity name information representing another object entity, and returning the message to the network; and in conjunction with all other limitations in the claim.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NGHI V. TRAN whose telephone number is (571)272-4067. The examiner can normally be reached on Monday-Thursday and every other Friday (6:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John Follansbee/
Supervisory Patent Examiner, Art Unit 2451

Nghi V Tran
Examiner
Art Unit 2451
